

CLAIMS

1. An isolated compound having the structure shown in Figure 2, wherein n is an integer between 3 and 10 (inclusive) and X may be H, OH, alkyl, aryl, amyl, or an amino acid residue (optionally substituted) or a sugar residue (optionally substituted), and wherein R and R¹ are hydrophobic hydrocarbon or fatty acid chains (R may be the same as R¹ or different).
2. A compound according to claim 1, where n is an integer other than 3.
3. A compound according to claim 1 or 2, wherein n = 6.
4. A compound according to ^{claim 3} ~~any one of claims 1, 2 or 3~~, wherein X = H, OH, D-alanyl or N-acetyl glucosamine.
5. A composition, comprising a compound in substantially pure form having the structure shown in Figure 2, wherein n is an integer between 3 and 10 (inclusive) and X is H, OH, alkyl, aryl, amyl, or an amino acid residue (optionally substituted) or a sugar residue (optionally substituted), and R and R¹ are hydrophobic hydrocarbon or fatty acid chains (R may be the same as R¹, or different).
- ~~6. A composition according to claim 5, comprising an isolated compound in accordance with any one of claims 1 to 4.~~
7. A composition according to claim 5 or 6, in the form of a freeze-dried solid, an aqueous solution, or immobilised on a solid support.
8. A method of testing for a Gram ~~+~~ bacterial infection in a mammalian (typically, human) subject, the method comprising the steps of: obtaining a sample of body fluid from the subject; contacting the sample with a composition comprising a compound having the structure shown in Figure 2, wherein n is an integer between 3 and 10 (inclusive) and X is H, OH, alkyl, aryl, amyl, or an amino acid residue (optionally substituted) or a sugar

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residue (optionally substituted), and R and R' are hydrophobic hydrocarbon or fatty acid chains (R may be the same as R', or different); and detecting binding of antibodies (if any) in the sample to the composition.

9. A method according to claim 8, wherein the sample of body fluid obtained from the subject comprises whole blood, serum, urine or saliva.

10. A method according to claim 8 or 9, comprising the detection of binding to the composition of IgG antibodies in the sample.

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11. A method according to ~~any one of claims 8, 9 or 10~~, wherein the test method comprises the performance of an enzyme-linked immunosorbent assay (ELISA), radioimmunoassay (RIA), or a Western blot.

12. A method according to ~~any one of claims 8 to 11~~, for testing for infection caused by Gram +ve cocci.

13. A method according to ~~any one of claims 8 to 12~~, for testing for infection by a Streptococcus, a Staphylococcus or an Enterococcus.

14. A method according to ~~any one of claims 8 to 13~~, for diagnosing the presence of a Gram +ve infection associated with a central venous catheter, a cerebrospinal fluid shunt or a prosthetic device.

15. A method according to ~~any one of claims 8 to 14~~, wherein the composition is in ~~substantially pure form~~ accordance with ~~any one of claims 5-7~~.

16. A diagnostic test kit for diagnosing the presence of a Gram +ve infection in a mammalian subject, the kit comprising: a solid support for performing a diagnostic test; and a composition in accordance with ~~any one of claims 5-7~~.

17. A kit according to claim 16, further comprising one or more of the following: labelled

antibody; enzyme substrate; control sample; buffer, and instructions for use.

18. A sterile vaccine composition for use against a Gram +ve infection in a mammalian subject, the vaccine comprising an isolated compound in accordance with ^{claim 1} ~~any one of claims 1 to 4~~ or a composition in accordance with ~~any one of claims 5 to 7.~~

19. An isolated immunoglobulin molecule or variant thereof having specific binding for a compound in accordance with ^{claim 1} ~~any one of claims 1 to 4~~.

20. An isolated eukaryotic cell producing an immunoglobulin molecule or variant thereof in accordance with claim 19.

21. A method of making a composition in accordance with ~~any one of claims 5 to 7~~ ^{claim 5}, the method comprising the steps of: culturing a Gram +ve bacterium in a growth medium so as to cause the bacterium to secrete into the growth medium the compound having the structure shown in Figure 2; separating the growth medium from the bacterial cells; fractionating the growth medium; and isolating that fraction which comprises, in substantially pure form, the compound having the structure shown in Figure 2.

22. *Staphylococcus epidermidis* strain CAN 6KIII, deposited under accession number NCIMB 40896.

23. *Staphylococcus epidermidis* strain HAR 6KIV, deposited under accession number NCIMB 40945.

24. *Staphylococcus epidermidis* strain COS 6KV, deposited under accession number NCIMB 40946.

25. *Staphylococcus epidermidis* strain MIL 6LI, deposited under accession number NCIMB 40947.

26. *Staphylococcus epidermidis* strain HED 6LI, deposited under accession number

NCIMB 40948.

27. *Staphylococcus haemolyticus* strain ONE 6KVI, deposited under accession number NCIMB 40949.

28. *Micrococcus kristinae* strain MAT 6LII, deposited under accession number NCIMB 40950.

29. A method according to claim 21, comprising the step of culturing one or more organisms selected from the group consisting of: *Staphylococcus epidermidis* strain CAN 6KIII; *Staphylococcus epidermidis* strain HAR 6KIV; *Staphylococcus epidermidis* strain COS 6KV; *Staphylococcus epidermidis* strain MIL 6LI; *Staphylococcus epidermidis* strain HED 6LI; *Staphylococcus haemolyticus* strain ONE 6KVI; *Micrococcus kristinae* strain MAT 6LII.

30. A method of making an immunoglobulin having specific binding for a molecule in accordance with claim 1, the method comprising the steps of: preparing a composition comprising ^{said isolated compound} ~~a compound in accordance with any one of claims 1-4~~; administering the composition to a mammalian subject; and obtaining from the subject a sample comprising antibodies or antibody-producing cells.

31. A method according to claim 30, wherein antibody-producing cells are isolated from the subject and used to prepare a hybridoma.

32. A method of obtaining an immunoglobulin or antigen-binding variant thereof having specific binding for a compound in accordance with ^{claim 1} ~~any one of claims 1-4~~, the method comprising the steps of: screening a library of viruses or other particles displacing an immunoglobulin or antigen-binding variant thereof on their surface; and selecting those members of the library which display an immunoglobulin or antigen-binding variant thereof which bind to the compound.

33. A method of inducing antibodies in a human subject, the method comprising the steps

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of preparing a physiologically acceptable composition in accordance with claim 5; and
administering the composition to the subject.

34. A vaccine for inducing antibodies in a mammalian subject the vaccine comprising a
composition in accordance with claim 5 and a physiologically acceptable excipient, carrier
or diluent.

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